UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,955	01/08/2002	Brent Anderson	113937-002	4496

24573 7590 04/01/2005

BELL, BOYD & LLOYD, LLC
PO BOX 1135
CHICAGO, IL 60690-1135

EXAMINER	
PIAZZA CORCORAN, GLADYS JOSEFINA	
ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/042,955	ANDERSON ET AL.	
	Examiner	Art Unit	
	Gladys JP Corcoran	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8 and 10-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8 and 10-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 16-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 16 recites that the step of texturing is carried out prior to the step of adhering, substantially simultaneously with the step of joining, or essentially immediately after the step of adhering. The independent claim 1 recites that the texturing utilizes a chill roll. While it is clear that the original Specification provides support for the texturing utilizing a chill roll, in the preferred embodiment, substantially simultaneously with the step of joining (Specification page 10 and figure 6), there appears to be no support in the original Specification for utilizing a chill roll in the step of texturing when the step of texturing is carried out prior to the step of adhering, or essentially immediately after the step of adhering.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,3-8 and 10-60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 1 is unclear in light of claim 16. As discussed above, the Specification only provides support for utilizing a chill roll when the texturing step is substantially simultaneously with the step of joining. Consequently, the recitation in claim 16 that the step of texturing is carried out prior to the step of adhering, substantially simultaneously with the step of joining, or essentially immediately after the step of adhering renders claim 1 unclear because it is unclear in light of the support in the original Specification how the texturing utilizes a chill roll without being substantially simultaneously with the joining/adhering step.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 3, 5, 6, 10-20, 22-27, 29, 30, 32-41, 43, 48, 49, 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as set forth in paragraph 3 of the previous Office Action filed December 6, 2004.

9. Claims 20-23, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as applied to claims 17, 18 33, 34 above, and further in view of Karfoil et al. '594 (US Patent No. 2,392,594) and/or Karfoil et al. '300 (US Patent No. 2,477,300) as set forth in paragraph 4 of the previous Office Action filed December 6, 2004.

10. Claims 42, 44, 45, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as applied to claim 41 above, and further in view of Taunton (US Patent no. 2,778,171) and/or Taunton (US Patent No. 2,778,173) as set forth in paragraph 5 of the previous Office Action filed December 6, 2004.

11. Claims 4, 5, 6, 10, 27, 29, 48, 50-54, 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as applied to claim 30 above, and further in view of Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as set forth in paragraph 6 of the previous Office Action filed December 6, 2004.

12. Claims 7, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as applied to claims 6, 11 above, and further in view of Hofmeister et al. (US Patent No. 6,500,559) as set forth in paragraph 7 of the previous Office Action filed December 6, 2004.

13. Claims 8, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Mallik (US Patent No. 6,533,884) as further taken with Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as applied to claims 4, 51 above, and further in view of Hofmeister et al. (US Patent No. 6,500,559) as set forth in paragraph 8 of the previous Office Action filed December 6, 2004.

14. Claims 1, 3-6, 10-20, 22-27, 29, 30, 32-36, 38-41, 43, 48-54, 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as further taken with Mainstone et al. (US Patent No. 5,006,056).

Kristen discloses a method for treating as surface of a layered polymeric structure suitable for forming a fluid container where two polymeric sheets (heat sealable inner layer and gas-impermeable outer layer) are bonded with an intermediate polymeric material (intermediate layer) and where an outer surface of one of the sheets is textured to form a pattern on the outer surface where the pattern is dimensioned to form fluid pathways on the outer surface to assist in removing fluid from the surface (intersecting channels).

Kristen does not entirely disclose all the particulars of the method of texturing the structure, stating that the films may be laminated, co-extruded, or extrusion coated and that the texturing (embossments) can be formed during extrusion or post-embossed. It is considered well known in the laminating arts, in particular for laminating film layers for packaging material, to laminate polymeric layers by extrusion lamination (extruding a molten layer between two non-molten layers). For example, Araki discloses methods for forming packaging materials ([0001], [0028]) by extrusion laminating ([0030], [0228], [0229]) a sealant layer ([0223]) to a barrier material (base material [0222]) with a molten intermediate layer (resin layer [00224]). The extrusion lamination in Araki provides the two non-molten polymeric sheets (sealant layer and base material) and positions the two sheets to overlap and define an interference zone and then directs molten polymeric material (resin layer) into the interference zone to adhere the two sheets and form a layered structure ([0229]). Araki provides the adhering step of the two sheets by utilizing a chill roll (cooling roll 32, [0230]). It would have been obvious to one of ordinary skill in the art at the time of the invention to form the laminate as shown by Kristen by overlapping two non-molten sheets, directing a molten material between the overlap to form a laminate for packaging material as is considered a well known preferred process in the art as exemplified by Araki.

As to the limitation that the texturing of the outer surface of the first or second sheets utilizes a chill roll, Kirsten discloses that the texturing (embossing) is performed either during the extruding or post-embossing (column 5, lines 23-33) but does not specifically disclose whether a chill roll is utilized. Araki discloses extrusion lamination

with a chill roll but does not specifically disclose texturing utilizing a chill roll. It is considered well known in the art to provide a chill roll in an extrusion lamination method with a textured outer surface in order to simultaneously emboss the layers being laminated. For example, Mainstone discloses it is known to provide the chill roll of an extrusion lamination apparatus with a textured outer surface in order to emboss the laminated materials (column 1, lines 10-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method for treating the laminate as shown by Kristen and Araki above by texturing utilizing a chill roll as Kirsten suggests embossing during extrusion, Araki suggests extrusion laminating with a chill roll, and it is considered well known in the art to utilize the chill roll for texturing during extrusion lamination as exemplified by Mainstone.

As to claim 3, Kristen discloses the sheets are monolayers. As to claims 5,6 and 10, Kristen and Araki disclose the claimed polymers for the outer sheets, additionally, it would have been well within the purview of one of ordinary skill in the art to select any of the well known polymeric materials for packaging layers. As to claim 11, Kristen discloses the sheet is a polyamide (nylon) (column 4, lines 54-61). As to claim 12, such nylons are considered well known nylons in the art for packaging materials and it would have been well within the purview of one of ordinary skill in the art to select such materials. As to claim 13, Araki discloses extruding the intermediate layer. As to claim 14, both Kristen and Araki ([0224]) disclose the intermediate layer is a polyolefin layer. As to claim 15, the molten polymeric material in Kristen and Araki is a homopolymer of ethylene. As to claim 16, Kristen and Mainstone disclose the step of texturing is carried

out substantially simultaneously to the step of joining. Kirsten additionally discloses it is known in the art to perform the step of texturing (embossing) after laminating. As to the limitation that the texturing is prior to the step of adhering, such is met when the thermoplastic film layers are placed in contact with the rolls prior to passing through the nip, additionally it would have been well within the purview of one of ordinary skill in the art to perform the texturing step before laminating as is considered well known in the art. As to claims 17, 18, 19, Mainstone discloses texturing by contacting the sheet with a surface having a pattern on a chill roll. As to claim 20, the embossing roll in Mainstone is considered to read on a back-up roll. As to claims 22 and 23, the pattern is such that the surface of the embossing roll has parts that extend inward and parts that extend outward (such is considered conventional and inherent in providing an embossed surface on the chill roll). As to claim 24, Kristen discloses the embossing rolls may be steel on steel or steel on rubber and Mainstone discloses the chill roll is metal. As to claim 25, Kristen discloses the back-up roll is made of rubber. Additionally it is noted that it is known in the art to form rolls of cork or plastic and it would have been well within the purview of one of ordinary skill in the art at the time of the invention to provide the rolls of known materials. As to claim 26, the pattern in Kristen is considered to comprise a plurality of spaced objects (waffle pattern). As to claims 27 and 29, as discussed above, Kristen and Araki disclose the claimed polymers for the outer sheets, additionally, it would have been well within the purview of one of ordinary skill in the art to select any of the well known polymeric materials for packaging layers. As to claim 30, Mainstone and Kirsten disclose the step of texturing is carried out substantially

simultaneously to the step of joining. As to claim 32, the intermediate layer in Kristen and Araki is considered to be an adhesive material. As to claims 33, 34, 35, Mainstone discloses texturing by contacting the sheet with a surface having a pattern on a chill roll. As to claim 36, the embossing roll in Mainstone is considered to read on a back-up roll. As to claims 38 and 39, the pattern is such that the surface of the embossing roll has parts that extend inward and parts that extend outward (such is considered conventional and inherent in providing an embossed surface on the chill roll). As to claim 40, the pattern in Kristen is generally a checkerboard pattern (waffle pattern). As to claim 41, Kristen discloses the pattern is a series of protuberances (column 4). As to claim 43, Kristen discloses the protuberances have a polygonal shape (rectangular and triangular). As to claims 48, 49, 56, Kristen discloses the sheets are monolayers. As to claim 57, Kristen discloses the sheet materials are of a variety of well known packaging materials including polyamide and polyester (column 4, lines 54-61). As to claim 58, the intermediate layer in both Kristen and Araki is a polyolefin layer. As to claims 59 and 60, Kristen and Araki disclose the intermediate layer is a homopolymer of polyethylene.

Kristen discloses that the laminate includes sealant and barrier layers of a variety of materials and additional intermediate layers of a variety of materials. As to claims 5, 6, 11, 27 and 29, Araki discloses the well known materials for forming the polymeric layers. As to claims 4, 48, 50, 51, 56, Araki discloses it is known in the art to provide sealant or base materials of either mono or multiple layers. As to claims 52-54, Araki discloses multiple layers selected form a group of polymers including polyolefins, barrier materials, PVOH, PVDC (page 17). As to claim 57, Araki also discloses that the base

material may comprise of polyamide or polyester (page 17). As to claim 58, both Kristen and Araki disclose the intermediate layer is of a polyolefin material. As to claim 59 and 60, Kristen discloses the intermediate layer is a homo polymer of polyethylene. As to claim 59, Araki discloses the intermediate layer (resin layer) is a copolymer of ethylene and alpha-olefin having form 3-20 carbons. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming a laminate as shown in Kristen with well known material layers and compositions for the barrier, sealant and intermediate layers as exemplified by Araki, only the expected results would be attained.

15. Claims 20-23, 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as further taken with Mainstone et al. (US Patent No. 5,006,056) as applied to claims 17, 18 33, 34 above, and further in view of Karfoil et al. '594 (US Patent No. 2,392,594) and/or Karfoil et al. '300 (US Patent No. 2,477,300).

As to claims 20, 21, 37, it is well known in the embossing art to provide two rolls including a back up roll containing the embossing surface pattern for embossing the material, especially since the laminate in Kirsten is entirely embossed. For example, Karfoil '594 discloses an example of two rolls E and E' for embossing polymeric material prior to the laminating step in order to ensure a proper embossment of the material. While, Karfoil '300 discloses an example of where two rolls (11 and 4) are provided with a surface pattern in order to provide the pattern on both sides of the material. It would have been obvious to one of ordinary skill in the art at the time of the invention to

provide the method of forming a laminate as shown by Kristen, Araki and Mainstone by providing two embossing rollers including a back up roll with a surface pattern as is considered well known in the art and further exemplified by Karfoil '594 in order to provide a proper embossment in the material and/or Karfoil '300 in order to emboss both sides of the laminate.

As to claims 22, 23, 38, 39 it is considered well known in the art to emboss with surface patterns containing patterns that either extend outward, extend inward or both. For example, the rolls in Karfoil '594 contain inward and outward extending patterns (E, E'). Additionally, the rolls in Karfoil '300 also show rolls containing inward and outward extending patterns. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the laminate as shown in Kristen, Araki and Mainstone by providing the pattern as extending inward and/or outward as is considered well known in the art and further exemplified by Karfoil '594 and/or Karfoil '300.

16. Claims 42, 44, 45, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as further taken with Mainstone et al. (US Patent No. 5,006,056) as applied to claim 41 above, and further in view of Taunton (US Patent no. 2,778,171) and/or Taunton (US Patent No. 2,778,173).

It is considered well known in the art to provide a variety of different patterns including circular, irregular, multiple shapes on one surface, tear drop, S-shaped etc. for providing passage ways for fluid to flow in packaging materials. For example, the Taunton references disclose it is known in the art to provide a pattern of circular

protuberances, irregular shape patterns, s-shaped patterns and protuberances of differing shapes. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the laminate as shown by Kristen, Araki and Mainstone by providing the pattern of embossments in a variety of well known and obvious patterns in order to provide passage for fluids as exemplified by the Taunton references, only the expected results would be attained.

17. Claims 7, 8, 12, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristen (US Patent No. Re 34,929) in view of Araki et al. (WO 00/18836 with EP 1153974 as the English equivalent) as further taken with Mainstone et al. (US Patent No. 5,006,056) as applied to claims 4, 6, 11, 51 above, and further in view of Hofmeister et al. (US Patent No. 6,500,559).

As to claim 7, Kirsten discloses forming the outer layers of polyolefin material in particular of polyethylene. Hofmeister discloses it is known in the art to form outer layers of packaging materials of polyolefins including copolymers of ethylene and alpha olefins form 3-20 carbons. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming the packaging material as shown by Kristen, Araki and Mainstone by providing well known materials in the packaging arts as the outer layers as exemplified by Hofmeister, only the expected results would be attained.

As to claim 12, Kristen discloses the outer layer is of a polyamide (nylon). It is considered well known in the art to use nylon 6,6, nylon 6, or nylon 6,12 as nylon polyamide layers in packaging laminates. For example, Hofmeister discloses the

claimed nylon layers as examples of known polyamide layers used in packaging materials (column 5, lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the polyamide layer in Kirsten with well known nylon layers in the packaging arts as exemplified by Hofmeister, only the expected results would be attained.

As to claims 8 and 55, Araki discloses it is known in the art to provide the outer layers of packaging materials as multiple layers. Araki also discloses that the multi-layers are selected from a group of materials including EVOH. Hofmeister further discloses it is known to provide the outer layers of packaging materials of an ethylene and alpha-olefin copolymer (column 6, lines 7-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of forming the laminate as shown by Kirsten, Mallik and Araki with an outer layer of a multi-layer material containing a layer of EVOH as disclosed by Araki and a layer of ethylene and alpha-olefin copolymer as shown by Hofmeister that these layers are known in the art, only the expected results would be attained.

Response to Amendment

18. The declaration filed on January 31, 2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the Mallik (US Patent No. Re 34,929) reference.

19. The declaration filed on January 31, 2004 refers to an attached memorandum, however, there is no attached memorandum in the paper filed on January 31, 2004. It is noted that should the declaration be filed with a memorandum containing sufficient

evidence of conception and diligence, it appears that such a declaration with the memorandum would be sufficient to overcome the Mallik reference. However, it is further noted that additional rejections have been presented based on Kristen in view of Araki and these rejections would not be overcome by such a declaration.

Response to Arguments

20. Applicant's arguments filed January 31, 2004 have been fully considered but they are not persuasive.

Applicant argues on page 2 that the declaration filed on January 31, 2004 overcomes the reference Mallik (US Patent No. Re 34,929) required for all the art rejections. As discussed above the declaration is insufficient to overcome the Mallik (US Patent No. Re 34,929) reference. It is additionally noted that new rejections have been presented that do not require the Mallik reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gladys JP Corcoran whose telephone number is (571) 272-1214. The examiner can normally be reached on M-F 8am-5:30pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gladys JP Corcoran
Primary Examiner
Art Unit 1733

GJPC